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FACEBOOK, INC.

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA  
SAN JOSE DIVISION

FACEBOOK, INC.,

Plaintiff,

v.

POWER VENTURES, INC. a Cayman Island Corporation; STEVE VACHANI, an individual; DOE 1, d/b/a POWER.COM, DOES 2-25, inclusive,

### Defendants.

Case No. 5:08-cv-05780 JW

**DECLARATION OF LAWRENCE  
MELLING IN SUPPORT OF  
FACEBOOK, INC.'S MOTION TO  
COMPEL PRODUCTION OF  
SOURCE CODE**

Judge: Hon. James Ware  
Courtroom: 8, 4th Floor

REDACTED

1 I, Lawrence Melling, declare the following expert disclosures.

2 **I. SUMMARY OF FINDINGS**

3 1. I am a research engineer at Zeidman Consulting. I make this declaration in  
4 support of Plaintiff Facebook, Inc.'s Motion To Compel Power Ventures, Inc. to Produce  
5 Documents based on my personal knowledge, unless otherwise noted. If called, I can and will  
6 testify competently to the matters set forth herein.

7 2. I conducted a review of the two PowerScript documents provided POWER  
8 2011.02.03 000004-22 (AEO) and POWER 2011.02.03 000023-67 (AEO). These documents  
9 [REDACTED] and did not include any information regarding  
10 how PowerScript was used to develop the interface of Power.com to Facebook.com. In addition,  
11 the PowerScript documentation did not provide any information on how the Power.com web  
12 pages are created, and this information is necessary to determining which data through  
13 unauthorized access was acquired and/or downloaded by Power from Facebook. As I explain  
14 further below, I found no information on how Power.com used PowerScript to interface, connect,  
15 browse, or transfer data to provide the Facebook functionality visible in the screenshots taken off  
16 the Power.com website, nor any information on how the Power.com website integrated the  
17 PowerScript applications to create the web pages.

18 **II. BACKGROUND**

19 3. This introductory section of my Declaration gives information about my  
20 qualifications as well as a discussion of technical terms needed to understand this report.

21 **A. Personal experience and background of Lawrence Melling**

22 4. I am a research engineer at Zeidman Consulting. I have over 30 years of executive  
23 management and engineering experience in developing new hardware and software technologies  
24 and bringing them to market. I have been engaged in applications engineering and marketing of  
25 electronic design automation (EDA) tools at major companies and small startups. I have also been  
26 involved in the development of sophisticated tools for source code and object code analysis for  
27 finding intellectual property infringement. My resume is attached as Exhibit A of this declaration.  
28

1           **B.     Website**

2       5.      Merriam-Webster's online dictionary defines a website as "a group of World Wide  
3      Web pages usually containing hyperlinks to each other and made available online by an  
4      individual, company, educational institution, government, or organization." These pages are  
5      hosted for viewing by one or more web servers. The pages are viewed using an Internet Browser  
6      or web client.

7           **C.     Internet Browser**

8       6.      An Internet browser or web browser is a typical client application used to navigate  
9      the Internet. The browsers access information such as web pages, images, videos, and games from  
10     Internet servers. The pieces of online information are addressed by a Uniform Resource Locator  
11     (URL) that specifies where the information is and how to retrieve it. Servers may provide static  
12     information to an Internet browser or may dynamically generate the information that is  
13     transmitted to an Internet browser.

14           **D.     Client**

15       7.      A "client" is a computer that makes a service request to a server (defined below);  
16      the server fulfills the request. Computer interactions using the client/server model are very  
17      common. For example, when an individual checks a bank account from his or her computer, a  
18      client program in the individual's computer forwards the request to a server program at the bank.  
19      The bank's program may respond, or it may, in turn, forward the request to its own client  
20      program that makes a request to another bank computer. With regard to the World Wide Web, the  
21      browser on an individual's computer is a client program. With regard to a database the client  
22      program is used to access and control the data from the individual user's computer. A client  
23      application can also be referred to as the "front-end" and the server application is often called the  
24      "back-end."

25           **E.     Server**

26       8.      A "server" is a computer on a network (such as an internal corporate network or  
27      the Internet) that is dedicated to a particular purpose; it stores information and performs critical  
28      functions. For example, a "database server" could store all of an organization's data on a single

1 machine, while providing database services to multiple users anywhere in the office or even the  
 2 world and also allowing access and control over the data. A typical “database server” will allow  
 3 users to utilize their data from custom applications designed to meet their specific needs. Server  
 4 software refers to software running on the server computer that “serves up” information to a client  
 5 computer. With regard to the World Wide Web, a web server responds to web client requests to  
 6 view web pages. These pages can be static (content doesn’t change) or dynamic (content is  
 7 determined when requested).

8           **F.     Web Scripts**

9           9.     “Web scripts” are written in a variety of languages to provide programming  
 10 functionality for generating dynamic web page content or to validate user input. Some of the  
 11 languages used for scripting include PHP, CGI, Perl, and JavaScript. Some scripts run on the web  
 12 server (server-side) while other scripts run on the user’s machine (client-side).

13           **G.     Web Crawler or Spider**

14           10.    A “web crawler” or “spider” is a computer program used to browse the Internet in  
 15 a systematic, comprehensive way. Web crawlers are typically associated with search engines and  
 16 are used to collect website information for search engine indexing, but spiders and web crawlers  
 17 are now being used to collect web page information for non-search related applications.

18           **H.     Computer Database**

19           11.    Computer databases consist not only of data, such as user names and addresses,  
 20 but also consist of schema and procedures represented by source code. The term “schema” refers  
 21 to the structure of the database including where to place the data, how to organize the data, and  
 22 the relationships between the data. For example, customer names may be placed in a field called  
 23 “Name” and that name is in a table called “Customers.” A table can be visualized as a spreadsheet  
 24 and the field would correspond to a particular column in the spreadsheet. In a database there are  
 25 many different tables. Each customer name may have an associated table that has fields that  
 26 contain the customer’s address, credit card number, account balance, and comments about the  
 27 customer. The table names, field names, types of data in the fields, and relationships between  
 28 different tables and different fields constitute the schema of the database and is described using a

1 special programming language such as the Structured Query Language, also known as SQL.

2       12. Procedures may also be stored in databases and are represented by a special  
 3 programming language such as SQL. These “stored procedures” can be used by programs that  
 4 access the database to manipulate the data in the database. For example, a stored procedure may  
 5 exist to compute the average outstanding balance for a list of customers. A program that is written  
 6 to access the database could also access the stored procedure in order to calculate this average.

7       **I. Source Code**

8       13. Computer programs can be written using complex instructions that look like  
 9 English. For example, the instruction `a = b*c+2` tells the computer to take the number stored in  
 10 memory and represented by variable `b`, multiply that by the number stored in memory and  
 11 represented by the variable `c`, add 2 and store the result in memory represented by the variable `a`.  
 12 Similarly, the statement `printf("Hello world!")` tells the computer to print the words “Hello  
 13 world!” to the computer screen. These high-level, English-like instructions are called “source  
 14 code.” Computer programs are made up of many lines of source code and the process of writing  
 15 these lines of code is called programming. Eventually these lines of source code are turned into  
 16 instructions that a computer understands, consisting of sequences of electronic ones and zeroes.  
 17 The process of turning human-readable source code into a file containing computer instructions is  
 18 called “compiling” and is performed by a special computer program called a “compiler.” In some  
 19 cases, source code is run directly by a computer, without creating any file of computer  
 20 instructions, in which case the program is “interpreted” by a special computer program called an  
 21 “interpreter” that converts each line of source code to computer instructions one at a time to be  
 22 executed by the computer.

23       **III. SCOPE OF EVALUATION FOR FACEBOOK’S MOTION TO COMPEL**

24       14. Based on my background and experience, I have been asked by the law firm of  
 25 Orrick, Herrington and Sutcliffe, on behalf of Facebook, to provide my opinions and conclusions  
 26 related to whether the documentation provided by Power Ventures, Inc. (“Power”) in response to  
 27 document requests for source code was sufficient to determine what data was transferred from  
 28 Facebook to Power.com, what Facebook functionality was available to Power.com users with

1 Facebook accounts, and how this functionality was implemented.

2 15. For the work of Lawrence Melling on this matter Zeidman Consulting is being  
3 compensated at a rate of \$200 per hour.

4 16. In reaching the opinions and conclusions discussed herein, I received, considered,  
5 and/or relied upon the following materials, copies of which are not attached but can be provided  
6 upon request:

- 7 a. Screenshots of Power.com website: FBPOWER00041-00049.pdf,  
8 FBPOWER00057-00073.pdf, FBPOWER00075-00087.pdf,  
9 FBPOWER00088-00088.pdf, FBPOWER00089-00091.pdf,  
FBPOWER00095-00106.pdf, FBPOWER00109-00118.pdf,  
FBPOWER00133-00137.pdf, FBPOWER00140-00148.pdf, and  
FBPOWER00150-00153.pdf.
- 11 b. [REDACTED]  
POWER 2011.02.03 000004-22 (AEO).pdf
- 13 c. [REDACTED] POWER 2011.02.03 000023-67 (AEO).pdf
- 14 d. Steve Vachani Deposition Transcript: 2011.07.20 [Power] Vachani, Steve  
(Full)

15  
16 **IV. ANALYSIS**

17 17. Power produced a [REDACTED] and a [REDACTED]  
[REDACTED] that were reviewed. Both documents are [REDACTED]  
[REDACTED]  
[REDACTED] They lack any high-level architectural explanation of the  
20 PowerScript system and provide no information on the implementation of the Facebook  
connection or any description of creating and displaying Power.com web pages from the  
21 information gathered by a PowerScript application. The documents lack any information  
22 regarding how the system interfaces with email servers, databases, and the server file system  
[REDACTED] The documents also offer no information on  
23 the data or file system security for the Power.com website. These documents do little more than  
[REDACTED] and offer no information about how  
24 Power.com connected with Facebook, what data could be transferred, what Facebook functions  
[REDACTED]

1 were supported, and how those functions were implemented.

2 18. The two documents simply [REDACTED]

3 [REDACTED] As such, the  
4 documents function much like how a dictionary does. Yet, merely because an author knows what  
5 words she can use to write a book does not mean she will know how to use them to write "War  
6 and Peace." It is also important to note that these documents offer no information on how to use  
7 a PowerScript application to generate actual web pages for display, including but not limited to  
8 documenting the [REDACTED] asserted in Mr. Vachani's deposition. *See e.g.* pages 99:  
9 14-25 and 100:1-2.

10 [REDACTED]  
11 [REDACTED]  
12 [REDACTED]  
13 [REDACTED]  
14 [REDACTED]  
15 [REDACTED]

16 19. Based on the documents it was impossible to determine how the Facebook  
17 interface functionality that is shown in the numerous screenshots of the Power.com website was  
18 developed, what information was used dynamically from Facebook, and what information was  
19 transferred to Power.com from Facebook.

20 20. In order to determine the information described above, I require the website source  
21 code including any scripts, both server-side (runs on Power.com server) and client side (runs on  
22 the user's computer), all PowerScript application source code written or used for gathering  
23 Facebook content or executing Facebook functions, the database or databases used by the website  
24 and/or by PowerScript, documentation on the email service or services used by PowerScript, files  
25 written or read by the PowerScript programs, the source code used to compile, interpret, and  
26 execute PowerScript scripts, and the source code for the spider or spiders used by PowerScript.  
27 In addition, I require all available support materials for the Facebook development, Power.com  
28 website, and PowerScript system such as readme files, tutorial examples, architectural diagrams

1 and definitions, system specifications and diagrams, build files, scripts, and server file system  
2 specifications, diagrams, and security documents.

3       21. Because the functionality evolved over a period of several months, all versions of  
4 the requested information should be included whether in version controlled form or copies or  
5 backups on digital media, including code designed to access and run Facebook's "Event Invite"  
6 service. The information gleaned from the different versions is critical to establishing Power's  
7 exact conduct in initiating the transmission of these Invites, the process by which Power initiated  
8 the transmission of these Invites, and the relevant timeframe when Power engaged in such  
9 conduct. The code will also reveal if Power kept count of the number of Invites sent, which I  
10 understand is important for statutory damages under the CAN-SPAM Act.

11       22. Defendants also argue that:

12           2) Facebook's claims pursuant to the CFAA and California Penal  
13 Code 502 fail because Power "did not circumvent any technical  
14 barriers," in accessing or providing its users with the tools to access  
the Facebook website.

15       23. The source code will reveal the exact process by which Power accessed or allowed  
16 others to access the Facebook website and services (such as sending email to users)—evidence  
17 that cannot be deduced from Power's produced documents.

18 **V. CONCLUSION**

19       24. It is my understanding that discovery in this case is ongoing. Accordingly, I  
20 reserve the right to supplement or amend my opinions in light of any additional evidence,  
21 testimony, or information that may be provided to me after the date of this report. I also reserve  
22 the right to supplement or amend my opinions in response to any expert reports served by any  
23 other party in the lawsuit.

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Dated: 10-Aug-2011

Lawrence Melling  
Lawrence Melling

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